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Mr. Hadjy;

The following comments are offered for the implementation of provisions of Section 9006 of the Farm Security and Rural Investment Act of 2002. These comments have been prepared by the Methane Recovery Work Group, which is comprised of representatives of Public Power Districts, the Nebraska Department of Environmental Quality, the University of Nebraska, USDA, and the Nebraska Rural Development Commission.

The Methane Recovery Work Group has been actively promoting development of methane recovery from anaerobic digesters to be located at animal confinement operations in Nebraska. Animal confinement operations are critical to Nebraska's economy and to the continued production of high quality meat, milk and egg production that is competitive nationally and globally. Acceptance of the increasing number and size of animal confinements is meeting increasing resistance in Nebraska and many other locations. It is imperative to the agricultural economy in Nebraska and many other states to develop improved waste management processes that reduce the environmental impacts of animal confinements and increase the acceptance of these operations.

Please consider the following comments when developing provisions of Section 9006:

1. Anaerobic digesters with methane recovery to provide fuel for electrical generation should be included as a renewable energy system in Section 9006 due to the energy production and the environmental benefits of capturing methane and odors and converting to energy. These projects should receive priority in order to protect the animal confinement industry that is critical to providing high quality and low cost food in Nebraska and the nation. Technologies exist that can achieve renewable energy production from confinement wastes and it can be improved technically and economically given support for its increased use.
2. Deployment and improvement of existing technology can best be achieved by grants that can be applied toward a portion of the cost of a methane recovery system. Confinement developers and operators need an incentive that directly impacts their 'bottom line' in the near term in order pursue a more costly waste management option. Direct loans and loan guarantees can also provide incentives

that are more applicable to the long term perspective of confinement developers and operators.

3. a) In order to achieve greater value for the money provided under Section 9006, the type of renewable energy system to be purchased should consider environmental benefits, protection of the agricultural economy and the security of retaining high quality and low cost food production in the United States.

   b) The quantity of energy produced would vary depending on the confinement type and size. In general, a dairy could provide most of the energy needed to operate the dairy. A hog confinement would likely produce some amount more than the energy the confinement requires. A poultry confinement may produce more than the energy the confinement requires. Each confinement will have different renewable energy production and energy requirements depending on its design, location, size and other site-specific factors.

   c) The environmental benefits of a methane recovery system include:

   - Control of odors emitted from anaerobic digestion of wastes
   - Capture and use of methane (global warming potential in 100 years of 21) for fuel converting it to CO2 (global warming potential in 100 years of 1)
   - The liquid effluent from the anaerobic digester retains most of the fertilizer value of the waste stream and can be applied to farm ground in manners that reduce fertilizer runoff
   - Reduction of solids to be disposed of on farm ground
   - Offsets energy produced from non-renewable resources
   - Offsets fertilizer that is produced from non-renewable resources

   d) Methane recovery systems would be replicable throughout Nebraska and the nation as confinements reside in many areas of the state and the nation. There are several vendors and consultants with the expertise necessary to design systems that have been successful over the long term. This necessary expertise can expand given support for methane recovery.

   e) The amount of energy savings are reflected in item b) above.

   f) The amount of time necessary for the energy savings to equal the cost of a methane recovery system will depend on a number of factors. The cost of the system, the cost of electricity and the cost to operate and maintain the system are all site-specific factors. A reasonable estimate would be five to ten years for the energy cost savings to equal the additional cost of a methane recovery project compared to other waste management options.

   g) Other factors to consider should be requirements for feasibility studies. Also a review of the success of consultants and vendors should be required in order to assure the necessary expertise is available for a methane recovery project.

- The types of methane recovery projects targeted should be those that utilize proven technology and expertise that has demonstrated successful installations. Incremental innovations and improvements in technology should be encouraged and supported when the appropriate background research has been completed.

The geographic areas to be targeted for methane recovery should be those areas with significant numbers of animal confinements and the attendant grain production and meat packing industries necessary to support the confinements in the most economical manner.

Another important factor to consider is the use of the anaerobic digester effluent as fertilizer. Center pivot irrigation systems provide an excellent means to apply the liquid affluent as fertilizer. The anaerobic digester liquid effluent is essentially odorless and is typically stored in retention lagoons until it can be applied to farm ground. Center pivots can apply the effluent when the crops can best use the fertilizer and when the soil is dry. This distinct advantage of center pivot irrigation systems can best be realized in Nebraska since there are more center pivot systems in Nebraska than any other state.

Another factor to consider in Nebraska is the wide spread support of methane recovery. The Methane Recovery Work Group has a diverse membership, which includes utilities, regulators, university of Nebraska, local zoning officials and agricultural groups. The Methane Recovery Work Group has presented two workshops on methane recovery that have been well attended by utilities, economic development representatives, agriculture producers and other stakeholders in agriculture in general and confinement operators in particular.

4. Potential sources of additional funding are the Nebraska Environmental Trust Fund, Pork Producers Association, National Cattlemen's Association, the Sustainable Agriculture Research and Education program and the National Rural Electric Cooperative Association.

Please let me know if you have any questions or comments are the above information. We appreciate the opportunity to provide comments on implementation of this important program.

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